

REDESCRIPTION OF *BRUUNILLA NATALENSIS*
HARTMAN (POLYCHAETA: POLYNOIDAE),
ORIGINALLY REFERRED TO
FAUVELIOPSIDAE

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Abstract.—The abyssal polychaete *Bruunilla natalensis* Hartman from the Mozambique Basin, originally placed in the Fauveliopsidae, is re-described and referred to the Polynoidae: Macellicephalinae.

The abyssal polychaete *Bruunilla natalensis* was originally described by Hartman (1971:1411) from a single small specimen collected by the R/V *Anton Bruun* in the Mozambique Basin and referred to her new family Fauveliopsidae. In his *Keys to the Polychaete Families and Genera*, Fauchald (1977:118) characterized the genus *Bruunilla* as “*Incertae Sedis*, without obvious familial affiliations.” The description and figures by Hartman suggested to me that it might belong to the Polynoidae: Macellicephalinae, a group of deep and cold water polynoid species that I studied recently (Pettibone, 1976). A study of the holotype, which was kindly sent on loan from the Allan Hancock Foundation by Dr. Kristian Fauchald, revealed that the species does indeed belong to the Polynoidae. It should be pointed out that the single specimen was defective in a number of respects, as is often the case in abyssal soft-bodied polychaetes: all the setae and elytra, as well as most of the dorsal cirri were missing; the muscular pharynx was not extended and the jaws were not observed. The description of the species is supplemented as much as the defective holotype will allow. I thank my colleague Meredith Jones for his review of this manuscript.

Family Polynoidae Malmgren

Subfamily Macellicephalinae Hartmann-Schröder, emended
Pettibone, 1976

Genus *Bruunilla* Hartman, 1971, emended

Type-species.—*Bruunilla natalensis* Hartman, 1971, by monotypy. Gender: feminine.

Diagnosis.—Body short, flattened, tapered; segments 18 (first achaetous). Elytra and small elytophores, emerging near bases of notopodia (similar in position to cirrophores of dorsal cirri on cirriferous segments), 8 pairs on segments 2, 4, 5, 7, 9, 11, 13 and 15, with dorsal cirri on posterior 3 segments. Prostomium oval, slightly bilobed, without frontal filaments or lateral

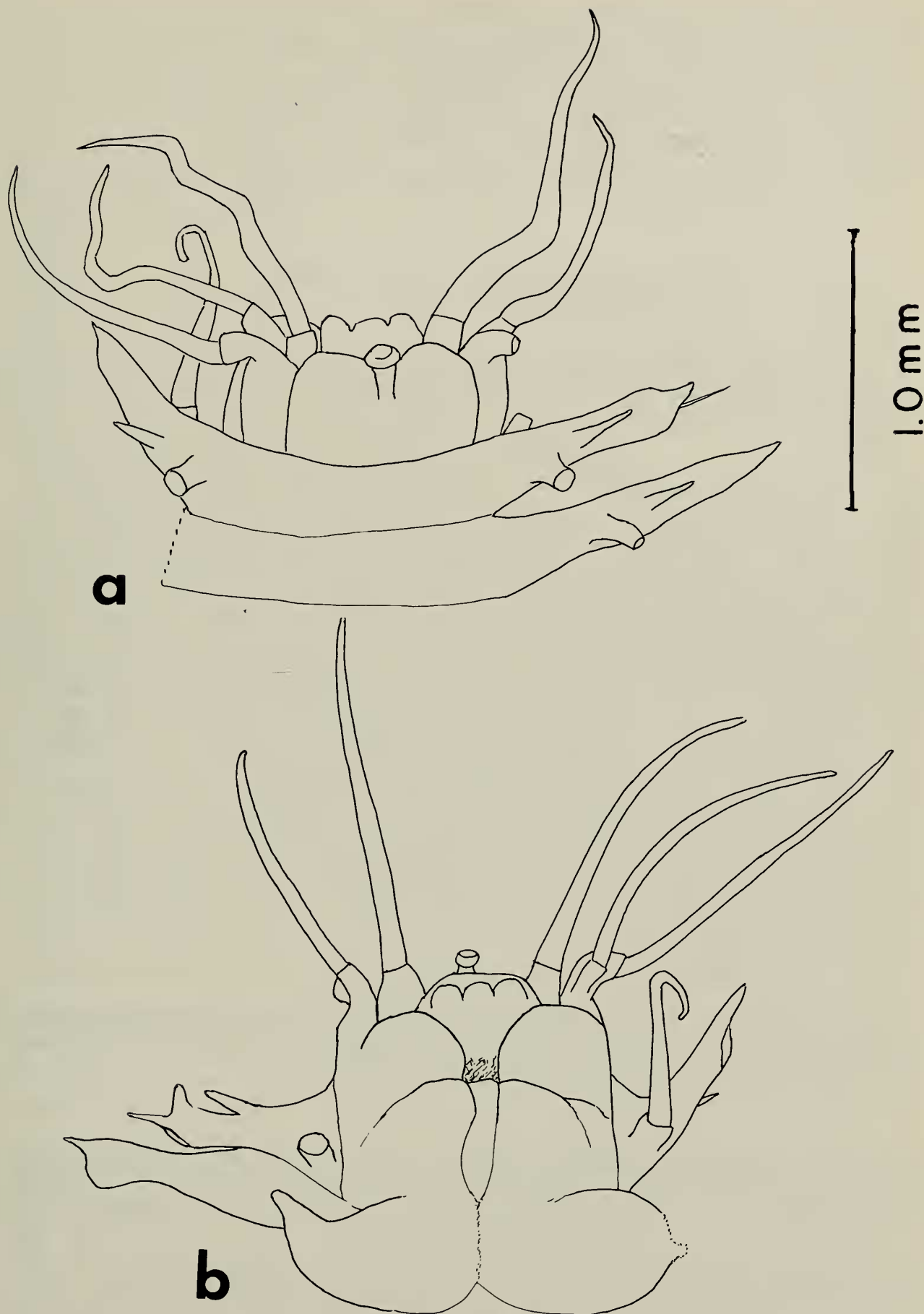


Fig. 1. *Bruunilla natalensis*, holotype (AHF 1202): a, Dorsal view of anterior end; left parapodium of segment 3 had been cut off; styles of median antenna, right dorsal tentacular cirrus, right buccal cirrus of segment 2, right dorsal cirrus of segment 3 and elytra of segment 2 missing; b, Ventral view of same; left margin of wing-like structure overlapping segment 3 damaged.

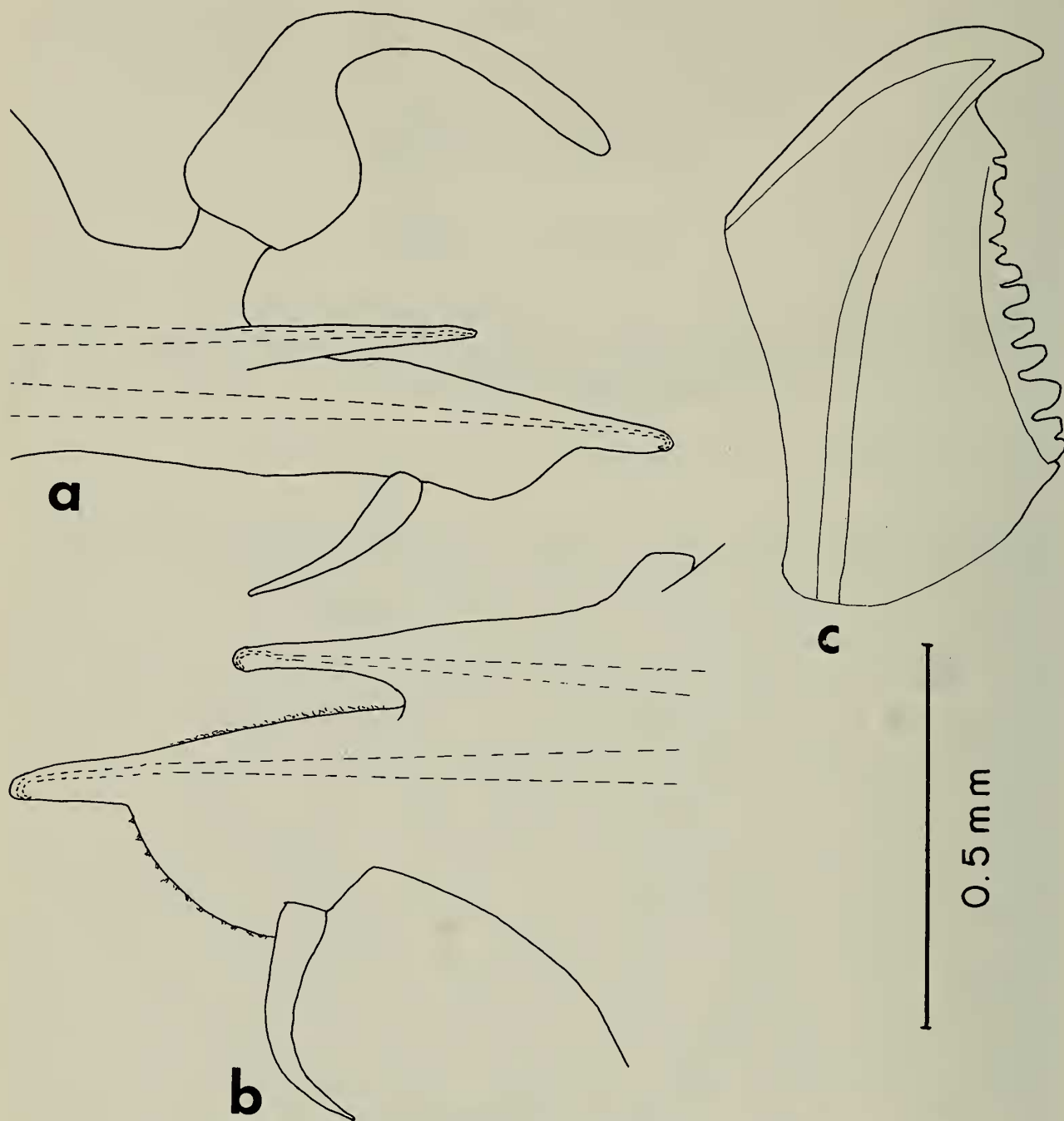


Fig. 2. *Bruunilla natalensis*, holotype (AHF 1202): **a**, Left cirriferous parapodium from segment 3, anterior view; acicula dotted; **b**, Right cirriferous parapodium from segment 8, anterior view; style of dorsal cirrus missing; **c**, One of jaws.

antennae; ceratophore of median antenna inserted on middle of prostomium; paired palps long, filiform; without eyes. First or tentacular segment fused to prostomium; achaetous tentaculophores with 2 pairs of tentacular cirri lateral to prostomium; facial tubercle on upper lip trilobed. Segment 2 with buccal cirri attached to basal parts of parapodia, lateral to ventral mouth and lower lip; styles longer than following ventral cirri. Unique wing-like structure on ventral side of lower lip and projecting posteriorly on segment 3. Parapodia biramous, both rami with elongate acicular lobes; notopodia

shorter than neuropodia. Setae unknown (all missing). Dorsal cirri with short cylindrical cirrophores and moderately long styles, bulbous basally; ventral cirri short, attached near distal ends of neuropodia. Without distinct dorsal tubercles on cirriferous segments. Nephridial papillae indistinct, none enlarged. Pygidium oval, truncate, with dorsal anus and pair of anal cirri (?). Pharynx with papillae (number?) and 2 pairs of jaws; jaw plates with inner row of teeth.

Bruunilla natalensis Hartman

Figures 1, 2

Bruunilla natalensis Hartman, 1971:1411, fig. 3a–f.—Fauchald, 1977:118.

Material examined.—Mozambique Basin, off Natal, southeast Africa, 34°06–10'S, 41°14–15'E, 4886–5069 m, red-brown mud, R/V *Anton Bruun* Sta. 382C, 31 August 1964—holotype (AHF 1202).

Description.—The holotype and only known specimen has a length of 9 mm, a width of 3.5 mm, including the parapodia, and 18 segments, the last one very small. The body is flattened, tapered posteriorly, with the segmental lines poorly indicated (Fig. 3a, in Hartman). The elytra are all missing; their elytraphores are rather small but slightly larger than the cirrophores of the dorsal cirri, at least on the more anterior segments. Dorsal tubercles on the cirriferous segments are indistinct. The anterior end was not clearly described and figured by Hartman (Fig. 1a, b; Fig. 3a, b, in Hartman). The oval prostomium is slightly bilobed, without lateral antennae; the clavate ceratophore of the median antenna is inserted near the middle of the prostomium; the style is now missing (long, filiform, as observed by Hartman); the palps, emerging from the anterior-lateral borders of the prostomium, have distinct palpophores and long filiform styles. The achaetous tentaculophores of segment 1 are fused basally to the lateral sides of the prostomium; they bear 2 pairs of tentacular cirri which are subequal in length to the median antenna and palps. Thus, there are 7 anterior filiform head appendages, not 5, as shown by Hartman (Fig. 3a, b); the facial tubercle on the upper lip, anterior to the ventral mouth, has 3 rounded lobes; the lateral lips are bulbous. Segment 2 (first setigerous segment) forms the lower lip, with a pair of long buccal cirri inserted ventrally on the basal parts of the parapodia; a pair of thickened bulbous lobes on the lower lip, with a median groove between them, projects freely on segment 3 and forms a flattened wing-like structure, tapering laterally (Fig. 1b; Fig. 3b, in Hartman and referred to as “a pair of palplike flat pads”).

The biramous parapodia are elongated, about as long as the width of the body (Figs. 1a, b, 2a, b; Fig. 3a–3b, in Hartman). Both rami have stout acicula, tapering distally to slender hooked tips within projecting acicular lobes; the notopodia are smaller and shorter than the neuropodia. The setae

are all missing but there is evidence that there was a small bundle of notosetae and a fan-shaped bundle of neurosetae. The dorsal cirri have short cylindrical cirrophores; the styles are inflated basally and may extend beyond the distal tips of the neuropodia; they are mostly missing (present on segments 3, left 6 and right 12; Fig. 2a, b; Fig. 3a, d, e, in Hartman). The ventral cirri are attached rather far distally and are short and tapered. The elytra are all missing but, judging from the small size of the elytophores, they are probably small. It is difficult to distinguish elytophores and cirrophores in the posterior region but there appear to be 8 pairs of elytra, on segments 2, 4, 5, 7, 9, 11, 13, 15, with dorsal cirri on the last 3 small segments.

The posterior end is somewhat damaged; the truncate pygidium, with the dorsal anus, extends beyond the small posterior parapodia. Nephridial papillae are indistinct. The muscular pharynx, occupying an inflated area in segments 4–7, was not extended. A slit on the ventral side of the body revealed that there are 2 pairs of amber-colored jaws and typical large vesicular papillae around the opening (exact number not determined); one of the jaws was removed and showed a row of about 12 teeth along the inner border (Fig. 2c).

Remarks.—Among the genera and species of Macellicephalinae covered by Pettibone (1976), *Bruunilla natalensis* is closest to *Bathyvitiazia* Pettibone, with type-species *B. pallida* (Levenstein, 1971) from the Northwest Pacific off Mexico, in 3816 m. The latter species lacks the unique wing-like structure on the ventral side of segments 2 (lower lip) and 3; the upper lip has a bilobed oral lobe, instead of a trilobed facial tubercle; the border of the jaw plate has about 32 small teeth, instead of about 12 larger teeth; the styles of the dorsal cirri are long and tapering, instead of shorter and bulbous basally. The setae cannot be compared, since they are unknown in *Bruunilla natalensis*.

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